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SOME NEW PLANTS FROM THE GASPÉ PENINSULA

M. L. FERNALD AND C. A. WEATHERBY

The completion a few years ago of the Perron Boulevard, the automobile road around the coast of the Gaspé Peninsula, has made available an area of great botanical interest which was formerly considered remote. In 1905 in one of his geological reports, Robert Chalmers wrote: "The roads are the worst in Eastern Canada, especially between Fox river and Sainte Anne des Monts"; consequently, until very recently this area has been difficult of access. In the same report Chalmers summarized his description of the region as follows:

"Most of the coast district between Fox river and Valley river [near Ste. Anne des Monts] is unsettled, except at the fishing stations . . . it forms an undulating plateau from 700–800 feet to 1,200–1,500 feet high, trenched by rivers and brooks, and with a steep face to the gulf. The banks . . . are angular, abrupt, and without that rounded appearance so characteristic of ice-worn surfaces. . . . Inlets at the mouths of rivers and brooks are enclosed between steep, angular bluffs, the upper brow of these being sharp in outline and bearing no traces of ice-action. Nor do the higher hill sides and summits exhibit any erosion by ice, subaerial decay and waste having apparently had full sway here. These features char-

¹ Chalmers's accurate account has become much stretched in the account published by the Department of Highways and Mines (Provincial Tourist Bureau) where the tourist is told: "After leaving the shore line, the road begins to climb. It climbs, and climbs some more, until it reaches 2,000 feet above sea level, near Marsouis (or Marsouins), the next village of any importance. But even that dizzy height will seem as a 'slight declivity' by the time the traveller reaches the summit, or extreme altitude of the 'Boulevard,' at Ruisseau-Vallée, where the highway reaches 2,600 feet."—The Gaspé Peninsula, 101 (Quebec, Dept. Highw. and Mines, April, 1930).

acterize the coast district from Fox river, or Anse au Vallon, to Ste. Anne des Monts, this part of the coast being higher than that to the east or to the west."

In discussing the floras of unglaciated areas of eastern Canada I wrote of this particular region: "Very similarly, many western or endemic species are confined to the cliffs and steep V-shaped valleys from Ste. Anne des Monts to Fox River, the region emphasized by Chalmers as practically unglaciated and where Coleman describes the valley of Rivière à la Martre which 'is cut 700 or 800 feet below the general level and is typically V-shaped. This and the striking re-entrants . . . show that it has never been shaped to any important degree by a valley glacier'; la Rivière aux Marsouins, with 'its valley . . . of the same type, deeply cut and V-shaped with bedrock showing at the bottom,' and beautiful Lac Pleureuse, whose 'steep shores present well-marked spurs which a glacier would have truncated.' This great stretch of essentially unglaciated and bleak coast is rugged, ragged and difficult to traverse. . . It is, consequently, almost unexplored, but such very slight examinations as have been made indicate that here is one of the chief regions of Gaspé for localized cordilleran types: Woodsia scopulina (Tourelle to Marsouin . . .), Agrostis idahoensis (Lac Pleureuse), Carex misandroides [rare Eastern representative of two local species of Alberta] (Lac Pleureuse . . .), Salix laurentiana [endemic ally of two Pacific Coast species] . . . , Descurainia Hartwegiana (Marten River . . .), Astragalus aboriginum [now found to be an endemic species of Mt. St. Pierre] . . and Oxytropis viscida [also an endemic, O. gaspensis], (Mt. St. Pierre), Hackelia deflexa, var. americana (Mt. St. Pierre to Mont Louis . . .), Artemisia frigida (Cap Chat to Mont Louis) and Arnica gaspensis (Cap Tourelle)."2

In early July last, making a tour of the Perron Boulevard with members of our families, we spent one day, joined by Dr. G. Ledyard Stebbins, Jr., in a partial survey of Mt. St. Pierre, and other days, unfortunately without Stebbins's companionship, in very superficial collecting on the more available talus-slopes and cliffs from near Rivière à la Martre to Gros Morne. Our botanizing was necessarily very limited but younger and more agile botanists, especially with

¹ Chalmers, Geol. Surv. Can. Ann. Rep. n. s. xvi. 253a (1905).

² Fernald, Persistence of Plants in Unglaciated Areas of Boreal America, Mem. Gray Herb. ii. (Mem. Amer. Acad. xv.) 299, 300 (1925).

the skill of Stebbins in cliff-climbing, will find this region rich in novelties. Most of the easily available plants of interest, such as Carex concinna R. Br., Androsace septentrionalis L. and Erigeron compositus Pursh, var. trifidus (Hook.) Gray, were already known from the area; but we extended the known range of Antennaria subviscosa Fernald from Bic in Rimouski County to the high calcareous seawalls of Gaspé (Rivière aux Marsouins, Cap Pleureuse and Gros Morne), and that of Arnica chionopappa Fernald westward along the St. Lawrence to Gros Morne, and secured the usual quota of Taraxacum for further study from the cliffs and talus.

A few of the plants are of such unusual interest as to merit special discussion.

Carex (§ Montanae) clivicola, n. sp. Laxe cespitosa, C. novaeangliae simulans, omnibus partibus tamen major; vaginis basilaribus castaneis vel purpurascentibus, superioribus saepe puberulis vel hirtellis; foliis 2 mm. latis flaccidis saturate viridibus longioribus 2-3 dm. longis; culmis elongatis subcapillaribus curvantibus plerumque folia superantibus 2-3.5 dm. altis; spica mascula lineari-cylindrica attenuata sessili 5-10 mm. longa, squamis obtusis oblongo-ovatis stramineis vel brunneis albo-marginatis; spicis femineis 2 vel 3 subdistantibus omnibus sessilibus 4-7-floris ebracteatis vel ima bractea angustata foliacea 1-3.5 cm. longa aliquando subtensa; squamis ovatis obtusis mucronatisve 2.5-3 mm. longis 1.5-2 mm. latis stramineis brunneotinctis late albescenti-marginatis saepe erosis; perigyniis fusiformibus hirtellis 3.5-4 mm. longis 1-1.2 mm. latis basi lutescente spongiosa elongata, rostro brevi 0.4-0.8 mm. longo breviter bidentato paullo deflexo; achaenio trigono anguste obovoideo 2 mm. longo.—Quebec: dry thicket at head of calcareous slaty talus of inner slope, Mt. St. Pierre, Gaspé Co., July 5, 1931, Fernald, Weatherby & Stebbins, no. 2411.

Carex clivicola is nearest related to C. novae-angliae Schwein. and to C. Rossii Boott. In the shape of its perigynia it is very similar to the former but in C. novae-angliae the perigynia are only 2.5–3 mm. long and the pistillate scales are shorter, narrower and tapering to sharp tips. The foliage of C. novae-angliae is narrower than in C. clivicola and usually as long as or even longer than the culms; the lowest pistillate spike is usually definitely stalked, and the commonly stalked staminate spike has lanceolate or lance-ovate acuminate scales. From C. Rossii the newly proposed species at once differs in its laxer habit, its lack of short basal culms, smooth and flaccid leaves, blunt scales and slenderly fusiform, rather than strongly gibbous perigynia.

The type-station of Carex clivicola is a notable one, for the dry calcareous talus of the slope just below is characterized by a strange assemblage of species, many of them southern, many others rare or otherwise unknown or almost unknown south of the St. Lawrence. Here various species, such as Acer pensylvanicum L. and Cornus rugosa Lam., reach essentially their northeastern limits. The dominant color of the vegetation is supplied by the extensive thicket of particularly whitish "Bois D'Argent," Elaeagnus argentea Pursh, while Rosa blanda Ait., often only 1 dm. high and with flowers scarcely 3.5 cm. broad, Prunus depressa Pursh, of New England river-gravels and seeming strangely out of place on dry subalpine rock-talus, and Amelanchier gaspensis (discussed in this paper), all abound. A whitish-leaved endemic representative of the cordilleran Astragalus aboriginorum Richardson (also discussed in this paper) here mingles. with the endemic Oxytropis gaspensis Fern. & Kelsey, Rhodora, xxx. 123 (1928) and Fernald, l. c. 141, t. 171. With them or close by grow Erigeron compositus, var. trifidus (Hook.) Gray of arctic and northwestern America, Anemone multifida Poir., of cordilleran (including Andean) range, the arctic and cordilleran Draba stylaris Gay, and other species making up a xerophytic association very unusual in eastern Canada. It is in the dry thicket at the top of this wind-swept talus that Carex clivicola forms a carpet. The habitat is much more like an arid ridge of the cordilleran region than the rich mesophytic forest of eastern Canada and northern and western New England in which C. novae-angliae abounds.

Saxifraga cernua L., var. latibracteata, n. var., a forma typica recedit foliis caulinis superioribus reniformibus vel late ovatis basi cordatis vel subcordatis; bracteis dilatatis, inferioribus reniformibus vel suborbicularibus vel late ovatis plerumque lobatis, mediis ovatis vel ellipticis vel obovatis.—Baffin Island; Gaspé Peninsula, Quebec; Keewatin and Alberta. BAFFIN ISLAND: Cockburn Island, Pond's Inlet, August 20, 1904, L. E. Borden, Herb. Geol. Surv. Can. no. 62,973; Frobisher Bay, August, 1927, C. S. Sewall, no. 294. Quebec: calcareous sea-cliffs and rock-slides by the St. Lawrence, west of Rivière à la Martre, July 26, 1922, Fernald & Pease, no. 25, 121, July 2, 1931, Fernald & Weatherby, no. 2449; mossy hornblende-schist at about 915 m., "Mt. Logan" (Mt. Mattaouisse), July 22, 1922, Fernald & Pease, no. 25,120; cold chimneys and rock-shelves at about 915-1000 m., south side of Fernald Pass, Mt. Mattaouisse, July 8, 1923, Fernald, Griscom, Mackenzie, Pease & Smith, no. 25,820; brook at head (about 1000 m. alt.) of Pease Basin, between Mts. Logan and Pembroke, July 13, 1924,

¹ See Fernald, Rhodora, xxx. 122 (1928).

Pease & Smith, no. 25,821; dripping cliffs and chimneys at head (about 1000 m. alt.) of Pease Basin, July 16, 1923, Griscom & Pease, no. 25,823; wet rocks and chimneys, alt. 825–1125 m., Gorge of Northeast Branch of River Ste. Anne des Monts, Tabletop Mts., August 5, 1923, Fernald, Dodge & Smith, no. 25,824 (TYPE in Gray Herb.). Keewatin: Fullerton, September 4, 1910, J. M. Macoun, Herb. Geol. Surv. Can. no. 79,247. Alberta: Rocky Mts., 1857–8, Bourgeau; Elbow River, June–July, 1897, J. Macoun, Herb. Geol. Surv. Can. no. 20,133; Malique Lake, July 19, 1908, S. Brown, no. 1270; Lake Louise, July 17, 1906, S. Brown, no. 663.

Typical Saxifraga cernua of Eurasia and of our arctic and highalpine regions has the upper cauline leaves truncate to cuneate at base and all the bracts or all but the very lowest narrow (mostly linear-lanceolate to oblong-linear), the change from foliage-leaves to bracts being abrupt. This typical S. cernua extends south in America to the Torngat region of Labrador, very locally to the Shickshock Mts. of Gaspé (Pease & Smith, no. 25,822) and to the high mountains of Colorado and Utah.

It is probable that var. latibracteata includes some specimens referred to S. cernua, forma bulbillosa Engl. & Irmscher, Pflanzenr. iv¹¹⁷. 274, fig. 65, N (1916). Their figure 65, N might well have been drawn from the Fullerton material (J. M. Macoun, no. 79,247) which they cite as belonging to forma bulbillosa. Their description, however, makes no mention of divergence of the bracts from those of the common European and Arctic forms. In America var. latibracteata is so general a tendency of the species and such a departure from the forms (unless forma bulbillosa be excepted) recognized by Engler & Irmscher that it seems to us a definite geographic variety, comparable with frondose variations in other groups which occur about the Gulf of St. Lawrence.

AMELANCHIER gaspensis (Wiegand), n. comb. A. sanguinea, var. gaspensis Wiegand, Rhodora, xiv. 139 (1912).

In his revision of *The Genus Amelanchier in eastern North America*¹ Wiegand separated A. sanguinea (Pursh) DC. and A. humilis Wiegand from the cordilleran group represented by A. florida Lindl. by the fact that the two former have the "Margins of the leaf forming an angle at the apex," in A. florida and its allies the "Margins of the leaf forming a rounded or sub-truncate, rarely retuse, apex." The diagnostic characters of A. sanguinea used by Wiegand were: petals 11–20 mm. long; sepals 4 mm. long; hypanthium open and flat;

¹ Wiegand, Rhodora, xiv, 117-161 (1912).

racemes more or less drooping; upper veins of leaves running straight to the apex of the teeth, "not so in the var." gaspensis, which was separated by its essentially glabrous quality and by "the veins of the leaves prominently anastomosing before reaching the teeth." In his discussion Wiegand recognized that var. gaspensis is not very satisfactorily placed with A. sanguinea and that its relationship is as much with A. humilis and the group of A. florida, saying:

"The var. gaspensis is a perplexing form. It varies much in stature and in habitat, as well as in leaf-outline and dentation. The leaves suggest an intermediate condition between this species [A. sanguinea] and A. humilis especially in the venation. In its more glabrous nature it approaches A. florida; but the general appearance of the majority of the specimens, both when in flower and when in fruit, suggests that it is better to retain this form in A. sanguinea until further field study renders it better understood. More field work on all the Amelanchiers of Gaspé is very desirable."

Since the publication of Amelanchier sanguinea, var. gaspensis much material has accumulated. This forms a consistent series and maintains the venation and the glabrous characters first assigned to it. It departs from A. sanguinea in other characters: its leaves are usually so broadly rounded or subtruncate at summit that our own collection of the past summer went by Wiegand's key directly to A. florida and two of the collections made by Rousseau were distributed under the latter name; in well developed leaves there are only 6–13 pairs of primary veins, in A. sanguinea 10–16; its racemes are quite erect, or in shade merely ascending, but not drooping; the sepals are only 1.5–3.5 mm. long, in A. sanguinea 3.5–4.5 mm. long; and the very narrow (oblanceolate) petals are only 6–9 mm. long.

Differing from A. sanguinea in its glabrous or quickly glabrate foliage, its leaves commonly more rounded or subtruncate at summit, its fewer nerves with anastomosing tips, its erect racemes with glabrous or barely pilose rachis and pedicels, its shorter and glabrous or promptly glabrate sepals, and its shorter petals, and occupying a clearly circumscribed area northeast of the range of A. sanguinea, A. gaspensis seems to be quite as definite a species as any in the group.

The affinity of A. gaspensis with the A. florida complex of the cordilleran region and with the geographically intermediate A. humilis has been noted. From the former series it is at once distinguished by its thinner leaves with at most pale green lower surfaces, the cordilleran series having the coriaceous leaves glaucous beneath. From A. humilis it differs in its glabrous or promptly glabrate leaves

with more rounded or subtruncate summits and fewer veins, the glabrous or only sparsely pilose young rachis and pedicels (densely tomentose in A. humilis), the glabrous or promptly glabrate calyx and the narrower petals.

The following collections, all from the Gaspé Peninsula or neighboring counties of Quebec, belong to A. gaspensis. Gaspé co.: talus of calcareous cliffs near Cape Rosier, Pease, no. 20,216; prairies humides près de la Rivière York, Victorin, Rolland, Brunel & Rousseau, no. 17,431; marais saumâtres derrière le Barachois de Coin-du Banc, Victorin et al., no. 17,434; ravin humid de la Grande-Coupe, Percé, Victorin et al., no. 17,435; rocky bank, Percé Mt., Percé, August 16-20, 1904, Collins, Fernald & Pease; limestone detritus, Mt. Ste. Anne, Percé, July 24, 1905, Williams, Collins & Fernald; Grand River, June, 1903, G. H. Richards; dry slaty talus of cliffs, Lac Pleureuse, Fernald, Dodge & Smith, no. 25,840; Mont Louis, Victorin, no. 28,582; calcareous slaty talus toward summit of Mt. St. Pierre, Fernald, Weatherby & Stebbins, no. 2451; thickets near mouth of R. Ste. Anne des Monts, August 3-17, 1905, Collins & Fernald; slaty ledges by R. Ste. Anne des Monts, Fernald, Griscom, Mackenzie & Smith, no. 25,839. BONAVENTURE CO: alluvial woods, mouth of Bonaventure R., July 31, 1902, Williams & Fernald, (Type of A. sanguinea, var. gaspensis); gravelly beaches and flats, Bonaventure R., August 5-8, 1904, Collins, Fernald & Pease; rivage de la R. Matapedia, Victorin, no. 28,694. MATANE co.: banks of Matane R., August 5, 1904, F. F. Forbes; calcaires gaspésiens, Ste.-Flavie, Rousseau, nos. 24,537; 24,554. RIMOUSKI CO.: dry ledges, Bic, July 15-18, 1904, Collins & Fernald; dry calcareous rocks and gravel, Bic, Fernald & Pease, no. 25,136; chemin de fer, Bic, Rousseau, nos. 26,241, 26,259; bois de conifères sur le conglomérat, Cap Enragé, Bic, Rousseau, no. 26,672.

Rubus idaeus L., var. eucyclus, n. var., a var. anomalo differt turionibus cinereo-tomentulosis, pedicellis calicibusque valde glandulosis—Quebec: a small colony in the midst of an extensive area of var. canadensis Richardson, slightly west of Ruisseau à Rebour, Gaspé Co., July 3, 1931, Fernald & Weatherby, no. 2452 (Type in Gray Herb.).

Rubus idaeus, var. eucyclus is the third "reversionary" variation known in the species with simple or merely lobed and rounded leaves or with ternate leaves with rounded leaflets. In foliage it is quite like the much-discussed European var. anomalus Arrhenius (R. obtusifolius Willd., R. Leersii Bab.), but its tomentulose canes and glandular pedicels and sepals show that it is a mutation from the common var. canadensis, in the midst of which var. eucyclus was growing. The superficially very similar var. Egglestonii (Blanchard) Fernald, Rhodora, xxi. 97 (1919) (R. idaeus, var. anomalus Fernald, Rhodora, ii. 195, t. 20 (1900), not Arrhenius; R. Egglestonii Blanchard,

Torreya, vii. 140 (1907)) is a parallel "reversionary" variation from var. strigosus (Michx.) Maxim.

In var. anomalus, to quote Focke, "the restraining process, by which the form of the foliage leaves was so curiously modified, extended also to the carpellary leaves, and . . . the axes of these was [were] shortened, so that they did not close and completely envelop the ovules. Of the two ovules in each carpel, one uniformly pined away at a very early stage; the other developed itself during the blooming time in the normal way, but only few carpels were produced. In most cases, however, they dried up whilst the flowering was in progress; and, though some appeared to be fertilized, yet seed entirely failed to ripen. The infertility of the plant, I saw, was correlative to the character of its foliage; and we must look upon it as only a curious form of R. idaeus, which deviates from the type, so far as the form of the leaf is concerned, in the same manner that Fragaria monophylla deviates from typical Fragaria vesca."

As I earlier pointed out, var. anomalus is not always sterile, for Babington² stated that it occasionally produces good seed, enough to have spread the plant to scattered stations. Whether var. eucyclus is sterile or fertile we cannot yet state. The colony, when discovered, was only in bud or very young anthesis.

Astragalus scrupulicola, n. sp. Fig. 1. Perennis; radice longissima verticali spongiosa caudicibus cespitosis; caulibus numerosissimis adscendentibus 1.5-3 dm. altis dense cinereo-tomentulosis; foliis 5-8 cm. longis; stipulis inferioribus late ovatis vel suborbicularibus obtusis basi connatis pallide brunneis chartaceis cinereo-tomentulosis 4-6 mm. longis, superioribus lanceolato-attenuatis dense adpresseque pilosis; foliolis 9-11 oblongo-lanceolatis obtusis sessilibus valde adscendentibus 1-2.5 cm. longis 3-7 mm. latis utrinque juventute saltem valde cinereo-tomentulosis jugis remotis; pedunculis axillaribus erectis cinereis 3-10 cm. longis; racemis laxe 7-17-floris anthesi 2-5 cm. maturitate 6-10 cm. longis; bracteis lanceolatis oblongisve brunneis scariosis cinereo-pilosis; pedicellis 1-2 mm. longis dense cinereis adscendentibus vel maturitate saepe arcuato-recurvantibus; calice dense adpresseque piloso pilis albescentibus, tubo 2.5-3 mm. longo, dentibus lanceolato-subulatis 1.5-2 mm. longis; corolla lactea 7-9 mm. longa, vexillo obovato retuso 1 cm. longo 6 mm. lato ungue lato 2.5 mm. longo; alis 7-9 mm. longis, ungue anguste lineari 3.5 mm. longo, limbo cuneato apice retuso 3 mm. lato, lobo basali unguiculato circa 1 mm. longo; carina obtusa lunata; leguminibus ellipticolanceolatis falcatis compressis 2-3.2 cm. longis medio 4-6 mm. latis

¹ Focke, Journ. Bot. x. 27 (1872), translated from Oesterr. Bot. Zeitschr. (1870) 98.

² Babington, Journ., Bot. xvi. 85 (1878).

breviter pilosis apice acutis basi in stipitem gracilem 5–7 mm. longum calicem valde superantem attenuatis, suturis crassis non sulcatis; seminibus oblique reniformibus olivaceis paullo nitidis 2.2–3 mm. longis.—Gaspé County, Quebec: dry talus of slaty cliffs, northern face of Mt. St. Pierre, at mouth of Rivière à Pierre, August 14, 1923 (old fruit), Fernald & Smith, no. 25,872; talus slope near top of Mt. St. Pierre, July 29, 1927 (old fruit), Kelsey & Jordan, no. 73; "schistes" concassés, Mt. St. Pierre, 19 juillet, 1928 (old fruit), Rousseau, no. 31,182; slaty talus, Rivière à Pierre, July 20, 1928 (fruit), Pease, no. 20,144; calcareous "slate-pencil" talus, north slope of Mt. St. Pierre, July 4, 1931 (young fruit), Fernald & Weatherby, no. 2454 and in Pl. Exsicc. Gray.; calcareous slaty talus, southern slope of Mt. St. Pierre, July 5, 1931 (flowers and young fruit), Fernald, Weatherby & Stebbins, no. 2455 (Type in Gray Herb.).

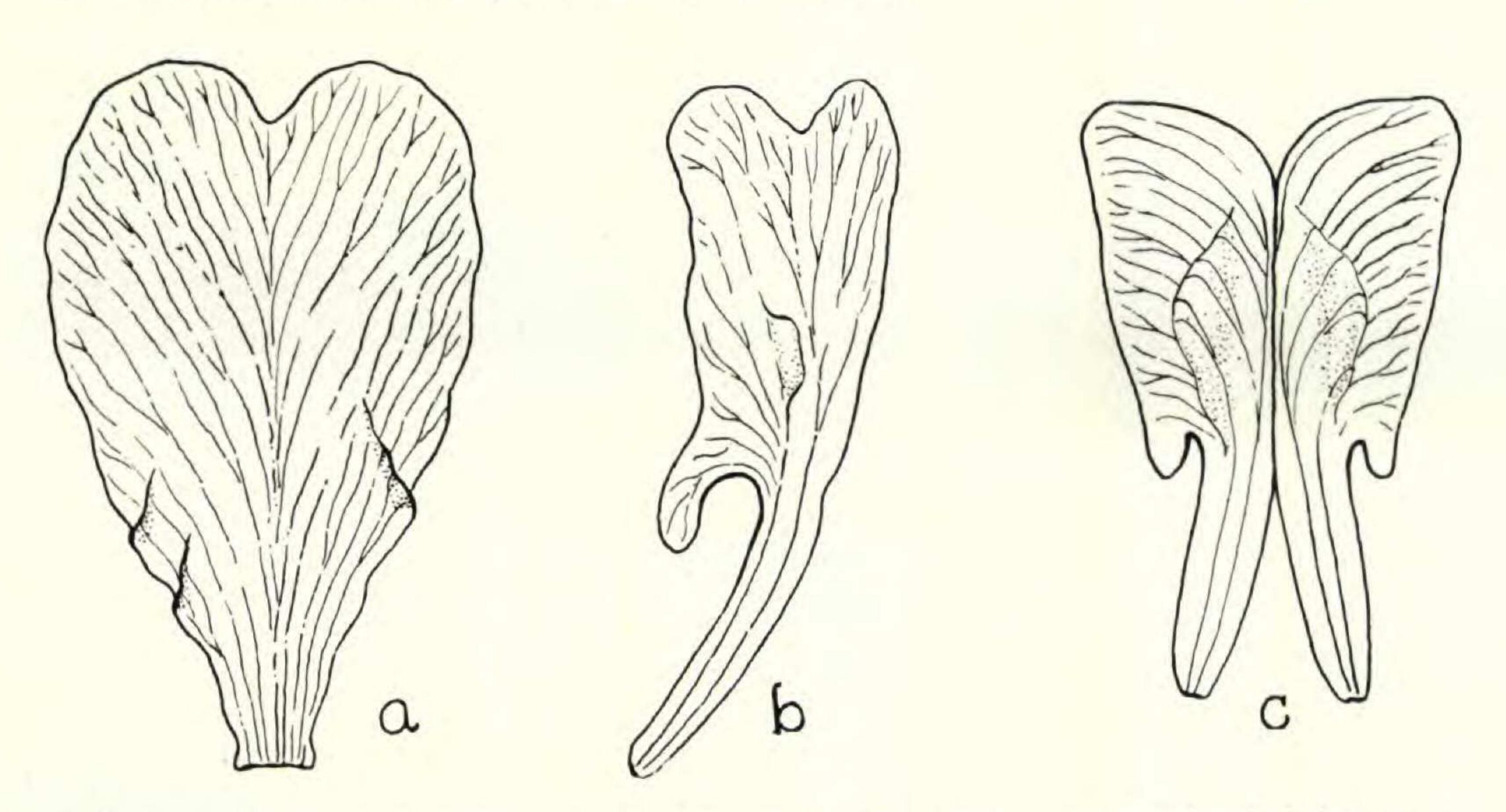


Fig. 1, Astragalus scrupulicola: a, vexillum; b, wing; c, keel, laid open; all \times 5.

The earlier collections in over-ripe fruit were identified, on account of their cinereous pubescence and superficial characters, with the rare Astragalus aboriginorum Richardson in Frankl. Journ. App. 746—reprint, 18 (1823)—a species with an ungrammatical name which was soon altered to A. aboriginum Spreng. Syst. iv². 288 (1827). The name A. aboriginorum (or its grammatical substitute) has covered an aggregate of plants in western North America; but the original and very detailed description of Richardson (of a plant from Carleton House on the Saskatchewan) emphasizes the blackish-pilose calyx, the corolla whitish or bluish with the carina "eminente caerulea," and the wings with an obovate basal lobe. Rydberg, in monographing

the group, as Atelophragma, says: "the typical form, agreeing with Richardson's description and specimens, is apparently very rare. Representative specimens have been collected between Lake Winnipeg and Bear Lake, Richardson; Rocky Mountains and Saskatchewan, Bourgeau." The Bourgeau material from the type locality (Carleton on the Saskatchewan), represented in the Gray Herbarium, has been approved by Rydberg with a mark of affirmation. In this the calyx is black-hairy and with calyx-lobes 2.5–3 mm. long; the wings have the broad basal lobe as described by Richardson and as illustrated by Hooker, as Phaca aboriginorum Hook. Fl. Bor.-Am. i. 143, t. lvi. (1830). In the Saskatchewan material (Bourgeau), as well as in specimens of Burke's from the east side of the Rocky Mts., sent by Hooker to Gray, the flowering raceme is rather dense, and this character is well displayed in Hooker's plate.

The plant of Mt. St. Pierre in Gaspé, of which we were fortunate enough to secure a belated flowering individual, shows in the flowers marked differences from authentic Astragalus aboriginorum. Its flowering raceme is very lax. The calyx is white- (not black-) pilose and with teeth much shorter than in the plant of the Saskatchewan. The corolla is milk-white throughout; the carina not "eminente caerulea." The basal lobe of the wings is narrower and unguiculate, with a rounded sinus; not obovate, with an acute sinus, as shown in Hooker's figure. The legumes, too, are narrower and more compressed.

We are unable to match Astragalus scrupulicola with any of the western species recognized by Rydberg in his revision of Atelophragma and, therefore, are proposing it as another endemic of the Gaspé Peninsula. The name refers to the habitat: the sharp and angular pencil-like talus into which the rock of Mt. St. Pierre and some of the adjacent headlands disintegrates.

In this talus A. scrupulicola is associated with the endemic Oxytropis gaspensis Fernald & Kelsey and Carex clivicola (described in this paper), with the Gaspé endemic, Amelanchier gaspensis (also discussed in this paper) and with other highly localized representatives of species of the Great Plains or the western Cordillera. We are indebted to Dr. H. M. Gilkey for the drawings of details of the corolla shown in Fig. 1.

GRAY HERBARIUM.

¹ Rydb. Bull. Torr. Bot. Cl. lv. 120 (1928).